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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/522,791

09/22/2005

Kiyotaka Yasuda

8007-1087

6850

466 7590 12/10/2008  
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EXAMINER

YANCHUK, STEPHEN J

ART UNIT

PAPER NUMBER

4131

MAIL DATE

DELIVERY MODE

12/10/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/522,791	<b>Applicant(s)</b> YASUDA ET AL.	
	<b>Examiner</b> STEPHEN YANCHUK	<b>Art Unit</b> 4131	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10/31/2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 January 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>See Continuation Sheet</u> .                                  | 6) <input type="checkbox"/> Other: _____                          |

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :1/28/2005, 4/27/2005, 4/11/2006, 09/28/2006, 11/08/2006, 05/02/2007, 07/03/2007, 09/10/2007.

Art Unit: 4131

**NEGATIVE ELECTRODE FOR NONAQUEOUS ELECTROLYTE SECONDARY  
BATTERY, METHOD OF MANUFACTURING, SAME AND NONAQUEOUS  
ELECTROLYTE SECONDARY BATTERY**

Examiner: S. Yanchuk      SN: 10/522791      Art:4131      December 2, 2008

**Election/Restrictions**

Applicant's election without traverse of claims 1-6 in the reply filed on 10/31/2008 is acknowledged. Claims 7-27 have been cancelled.

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Kawakami et al (USPAT 6,051,340).

Claim 1 is rejected by figure 4d showing a pair of current collecting surface layers (105) wherein these surfaces can come in contact with an electrolytic solution [Col 4 Ln 44]. The active layer is interposed between the two layers (101) wherein the active layer is capable of forming lithium compounds [Col 4 Ln 45].

Claim 2 is rejected by figure 7 depicting an anode (401) of a cylindrical cell wherein the anode is shown in figure 4d as stated in Col 10 Ln 26.

Claim 3 is rejected by the teaching of the surface layers having a thickness of 3.8um in maximum height [Example 1, Col 20 Ln 28].

Claims 4 and 5 are rejected by the teaching of metals that are incapable of being alloyed with lithium for current collecting surfaces are Ni, Cu, Fe, and Co [Col 13 Ln 39].

Claim 6 defines the product by how the product was made. Thus, claim 6 is a product-by-process claim. For purposes of examination, product-by-process claims are not limited to the manipulation of the recited steps, only the structure implied by the steps. See MPEP 2113. In the present case, the recited steps imply a structure having a surface coated current collector. The reference suggests such a product.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawase et al (PGPUB 2004/0142242), in further view of Kawakami et al (USPAT 6,051,340).

Claim 1 is rejected by Kawase teaching an anode having an anode collector (22A) and an anode active material layer (22B) [Paragraph 1]. The layered anode is taught to be used in a secondary battery wherein the surfaces are to be brought into contact with an electrolyte solution (24) [Abstract, Figure 2]. There is also an active material layer interposed between the surface and the electrolyte (22C). Kawase fails

Art Unit: 4131

to teach a pair of active material layers wherein the active material layers exist on both sides of the anode.

Kawakami teaches anode that has active material on both sides of the anode as depicted in figure 4d [Col 10 Ln 26]. It would have been obvious to combine Kawakami with Kawase because Kawakami teaches an anode that would prolong the charging and discharging cycle life of the anode [Col 10 Ln 18] as well as a configuration that will be advantageous for spiral cylindrical type batteries [Col 10 Ln 28].

Claim 2 is rejected by figure 1 of Kawase depicting the material making up the surfaces being present over the whole thickness of the active material layer where applicable to connect the anode to the electrolyte layer (24).

Claim 3 is rejected by Kawase teaching the thickness of the active material being 3um [Paragraph 48].

Claims 4 and 5 are rejected by Kawase teaching the anode collector layer to be made of copper, stainless, nickel, titanium, tungsten, molybdenum, or aluminum [Col 4 79Ln 8]. The anode active material is taught to have a large capacity to insert and extract lithium such as  $\text{Ni}_2\text{Si}$ ,  $\text{CoSi}_2$ ,  $\text{NiSi}_2$ ,  $\text{Cu}_5\text{Si}$ , and  $\text{FeSi}_2$  [Paragraph 27].

Claim 6 defines the product by how the product was made. Thus, claim 6 is a product-by-process claims. For purposes of examination, product-by-process claims are not limited to the manipulation of the recited steps, only the structure implied by the steps. See MPEP 2113. In the present case, the recited steps imply a structure having a surface coated current collector. The reference suggests such a product.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to STEPHEN YANCHUK whose telephone number is (571)270-7343. The examiner can normally be reached on Monday through Thursday 8:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Sample can be reached on 571-272-1376. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/David R. Sample/  
Supervisory Patent Examiner  
Art Unit 4131

/STEPHEN YANCHUK/  
Examiner, Art Unit 4131